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¹The Cornell Veterinarian, 1959, 48, 214-223

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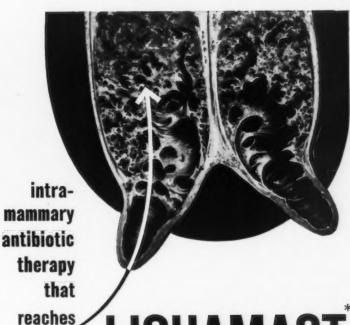
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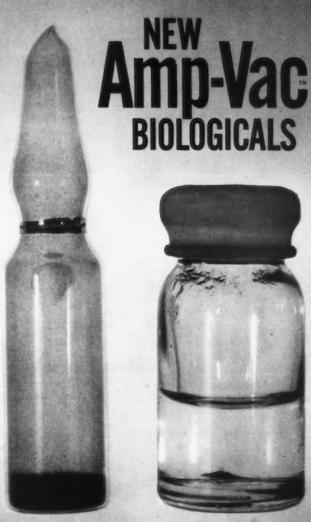
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- 1. Harris, J. R. and Clarkson, T. B.: Prevention of Relapses in Milk Fever, Vet. Med. 12:696 (Dec., 1955).
- 2. Baker, W. L., Jr.: Prevention of Relapses in Milk Fever, N. Am. Vet., 37:203 (Mar., 1956).
- 3. Graham, K.D.: Milk Fever Relapses, Vet. News (Canada) 20: (Nov., 1958).

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BRISTOL, TENNESSEE

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Steatitis in Cats

ROBERT M. YORK, D.V.M., Practitioner, Oakland, Calif.

Steatitis, or yellow fat disease, is by no means a new syndrome to academic nutritionists. Reports of histological changes in adipose tissue in rats fed a diet high in unsaturated fatty acids and low in Vitamin E

ROBERT M. YORK

goes back well over a decade.1 The disease was reported occurring naturally in kittens fed a commercial cat food by Holzworth and Coffin in 19532 and experimentally by Cordy and Stillinger in 1953.2 Particular attention was focused upon the disease in December 1958 with the advent of

the publication of a paper by Holzworth, et al., of definite clinical cases under natural conditions' as presented to the Angell Memorial Hospital in Boston. Presentation of this paper has stimulated much discussion on a very controversial question. This particular paper will attempt to serve two purposes. First, to acquaint one with some of the knowledge of the disease, and secondly to present the syndrome both clinically and from the clinical pathological aspect.

Relative to etiology it is believed that steatitis is caused by a systemic deficiency of Vitamin E. This hypothesis has been formulated through comparative work in rats, mink, swine and kittens.5,6,7 It is further believed that Vitamin E is destroyed in the presence of large amounts of unsaturated fatty acids. Apparently Vitamin E is rapidly destroyed in the presence of any developing rancidity. The saturation of the double bonds in the fatty acids, in the absence of antioxidants, either natural or synthetic, is apparently a critical point in the production of this disease. Apparently the existing Vitamin E is destroyed in the food. This fact can be illustrated by mixing Vitamin E in the presence of cod liver oil, which contains large amounts of unsaturated fatty acids, with certain diets. The end result is an animal deficient in Vitamin E and exhibiting steatitis.

The food product that is incriminated in the production of steatitis therefore would logically be one containing large amounts of unsaturated fatty acids and one with a low level of the natural antioxidants. Vitamin E falls into the category of a natural antioxidant. To date the reported naturally occurring cases of steatitis have all had one common factor; that is being fed large amounts of fish in the

diet, specifically red tuna. Red tuna fits all the listed prerequisites for the production of this disease. Apparently the red tuna meat contains large amounts of unsaturated fatty acids and low levels of the natural antioxidant, Vitamin E.

The clinical syndrome as seen by this clinician and as reported by Holzworth2,4 follows a relatively typical pattern. Usually the animal is presented to the veterinarian with most of the following symptoms. Fever (102.4 to 104) that is resistant to all treatment, anorexia, rough hair coat, emaciation, paleness of mucous membranes, and protrusion of the third eye lid. Physical examination reveals that the cat exhibits extreme hypersensitivity. They are usually very irritable and become vicious when handled. Palpation of the ventral aspect of the abdominal cavity reveals a "lumpiness" and increased firmness of the subcutaneous tissue. The thickness of the adipose tissue in relation to the emaciation is often impressive. The attitude, when left alone, is usually depression and lethargy. Diarrhea may or may not be present. Relative to diet, the owner will often relate that the cat will only consume red tuna. This seems to be constant once the disease has progressed. The clinical symptoms are in direct proportion to the severity of the disease.

The clinical laboratory findings, in our cases, are directly proportional to the volume of adipose tissue affected. Those cases with slight steatitis exhibit little if any change in the blood picture, whereas those with severe adipose tissue changes exhibit very definite findings.

In severe cases there is a leukocytosis, neutrophilia and a very definite shift to the left. Slight eosinophilia may or may not be present. Many neutrophiles show vascuoles, pseudopods and evidence of degeneration. Poikilocytosis was present in one of our cases. Nucleated erythrocytes are frequently present. Generalized microcytic, hypochromic anemia with many target cells is usually observed on smears of advanced cases. Synopsis of our laboratory findings are indicated below.

	Advanced	Early
	Cases	Cases
Total W.B.C.	20,000-40,000	.14,000-17,000
Segmented neutrophiles	50-70%	55-68%
Band cells	20-30%	2-10%
'etamyelocytes	5-10%	0
Eosinophiles	1-7%	2-7%
Lymphocytes	5-8%	25-30%
Nucleated erythrocytes	3-5/100 WBC	0-2/100 WBC

Probably the most important diagnostic tool available to the clinician presented with a possible case of steatitis is the biopsy incision. Positive cases may be easily recognized by the pathognomonic appearance of the subcutaneous fat and, if observed, the peritoneal

and mesenteric fat. This adipose tissue has a very characteristic color; that being a deep vellow tan, very lobulated and showing increased pigmentation of the interlobular spaces. This fat gives the impression of being necrotic, is very firm to the touch and possesses a rancid odor in the live animal. It should be emphasized that the amount of necrotic fat directly parallels the body's reaction to this tissue. The hyperthermia, malaise and change in blood picture are directly proportional to the amount of necrotic adipose tissue present.

Autopsy findings are mainly limited to necrotic fat tissue. General appearance is emaciation with massive deposits of "yellow fat." The appearance of the fat is as described under biopsy study. The most striking factor is the amount of fat present in the abdomen of cachectic cats. Solid deposits up to 5 centimeters thick may be present. These deposits would appear to interfere with intestinal motility. In one case there was extreme splenomegaly.

Microscopic examination of our tissues were essentially as described by Holzworth et al.4 Briefly, tissues show evidence of inflammatory necrosis. Neutrophiles invade in great abundance between the globular fat cells. Tissues stained with the Ziehl-Nelson method show large amounts of acid-fast pigment around the fat globules and between the fat cells. Macrophages resembling the lung "heart failure cells" were observed in the interlobular spaces.

Treatment in our series, prior to recognizing the condition, was antibiotics of all types plus corticosteroid therapy. The most striking factors during this therapy (in one case 25 days) were continued hyperthermia, continued soreness and general irritability and the gradual increase of the subcutaneous lumpiness. Interestingly enough we recognized three cases within a period of three days. These were placed on 30 mg. of d-alpha tocopherol intramuscularly twice a day. One of these died and two made a slow and progressive recovery in about three weeks' time. Once the animals started eating they were released for home treatment with oral Vitamin E therapy (d-alpha tocopherol) at a dosage of 50 mg. twice daily. The relatively high dosage was used orally because it was not known if the animal's ability to assimilate Vitamin E was interfered with after the removal of unsaturated fatty acids from the diet. Supportive therapy, fluids, vitamins and force feedings were found to be imperative in advanced cases. The dosages of Vitamin E administered were based on the work of Cordy^a which indicates that 30 mg. per day will protect cats against steatitis. Twice this amount is adequate therapeutically.

Discussion

From our brief knowledge of steatitis, specifically that Vitamin E deficient diets can produce the disease and that Vitamin E therapy will cure the condition, it would seem a simple matter for the red tuna industry to add d-alpha tocopherol to their product and thereby prevent any further trouble. Very recently some of the large companies have started adding this Vitamin E. Several of the companies do not indicate that they are doing such. Chemical analysis by one researcher® indicates that the synthetic Vitamin E is stable.

Some problems definitely still exist. One, that the amounts of Vitamin E being added are very probably inadequate to protect a cat against steatitis providing he eats solely red tuna. Another problem is that some popular brands do not yet contain the synthetic additive. A third problem, according to chemical assay,8 is that the amounts being added are not being rigidly controlled.

Summary

Steatitis in cats is a syndrome apparently caused by a systemic deficiency of Vitamin E. This is caused by foods high in unsaturated fatty acids, specifically red tuna. Clinical and pathological findings are discussed. Vitamin E therapy will cure even fairly advanced cases. Feeding of stable d-alpha tocopherol will apparently protect cats against the onset of avitaminosis E and the resultant syndrome known as steatitis

References

¹Mason, K E., Dam, H., and Granados, H.: "Histological Changes in Adipose Tissue of Rats Fed a Vitamin E Deficient Diet High in Cod Liver Oil," Anat. Rec., 94 (1946), 265-288.

²Coffin, D. L., and Holzworth, J.: "Yellow Fat in Two Laboratory Cats: Acid Fast Pigmentation Asso-ciated with Fish Bone Ration," Cornell Vet., 44 (1954), 63-71.

^aCordy, O. R., and Stillinges, C. J.: "Steatitls ("Yellow Fat Disease") in Kittens," North Am. Vet., 34 (1953), 714-716.

*Munson, Ellsworth, Small, Witgel, Jones, Tugenbull: "Steatitis ("Yellow Fat") in Cats Fed Canned Red Tuna," J.A.V.M.A., Vol. 133 (1958), 563-568.

*Mason, K. E., Dam, H., and Granados, H.: "Histological Changes in Adipose Tissue of Rats Fed a Vitamin E Deficient Diet High in Cod Liver Oil," Anat. Rec., 94 (1946), 265-288.

"Mason, R. E., and Hartsough, G. R. "Steatitis ("Yellow Fat") in Mink and its Relationship to Die-tary Fats and Inadequacy of Vitamin E," J.A.V.M.A., 119 (July, 1951), 72-75.

⁷Davis, C. L., and Gorham, J. R.: "The Pathology of Experimental and Natural Cases of 'Yellow Fat' Disease in Swine," Am. T. Vet. Res., 15 (1954), 55-59. *Personal discussion.

In the March-April Issue:

More Details on the June Meeting in the

Jack Jar Hotel
Son Francisco

Current Status of Distemper Immunization Programs*

GEORGE T. EDDS, D.V.M., Ph.D.

Vice-President, Product Development, Fort Dodge Laboratories, Inc.

With new testing procedures in the industry and in research, better indications as to whether a product has high or low potency, as far as protective or antigenic value, are now available.

Three tests are available for testing the serum fraction: (1) The egg neutralization test



GEORGE T. EDDS

for the distemper fraction; (2) Tissue culture neutralization test for the hepatitis fraction. It is our feeling in industry that the hepatitis fraction is more highly potent, more dependable than possibly the distemper fraction, and that the puppies certainly would get good protection with the hepatitis fraction:

(3) Hampster protection test to check the product for potency against the Leptospira.

Dr. Marsi and his co-workers in Weybridge, England, described a modification of the gel precipitin technique. It is now being used in the United States to check the antigenic potency of the vaccines.

It has been confirmed by workers in this country and in England that there is only one strain of canine distemper. The group at Newmarket, England, has shown that if you continue to pass distemper virus through a series of puppies that one will see the three types of distemper seen in practice—the nervous, digestive, and respiratory types. Also, it is known that if the nervous type is complicated with hepatitis these dogs will develop "champing" fits.

Some of the companies in industry maintain colonies of dogs, exposing them to the various modifications of this one strain. This broadens the antigenic coverage against these viral changes.

The information brought out by Gillespe et al., showing that certain puppies do not immunize is something that we have realized over the years. We have the disadvantage from an industrial viewpoint, though, that you, as practitioners, want every puppy vaccinated to be completely protected. The owner expects it of you. It challenges industry to supply the best possible product.

Gillespe, Baker and others have pointed out that it has been recommended that puppies should not be vaccinated until they are 12

weeks old. However, if we examine the antibody titer transferred through the colostrum, about 25 per cent of these puppies would immunize at about five weeks of age. If one starts using serum at that time and repeats at 7 to 10-day intervals to maintain a passive immunity in this puppy until 12 weeks, then the puppy should be protected. But one must remember that there are still 5 per cent that, for some reason, don't properly immunize. That 5 per cent may actually destroy or be immune to the gamma globulin that one is introducing into them so that one doesn't get the 100 per cent protection expected.

About 55 per cent more, or a total of 80 per cent of the puppies that would be brought into one's hospital, would be susceptible to infection or susceptible to immunization at seven weeks of age. One can approach 90 or 95 per cent by using serum following it later on with one of the antigens, whether it be killed or a live vaccine.

It is suggested again by reviews in the literature that 95 to 98 per cent of the puppies would be susceptible to infection or would immunize at nine weeks of age.

Practitioners who have had good results with the killed vaccines are still using them at about the same volume as of five years ago.

Perhaps as far as distemper is concerned we do not test for the entire antibody component when we test with the egg neutralization test. It is known, that over the years, the killed vaccine has given good results. Some practitioners in England say the vaccine program, as recommended under the Laidlaw-Dunkin regime several decades ago, gave better results than they are getting with any of the newer products.

From a theoretical standpoint, the attenuated virus does multiply in the tissues. It does stimulate good antibody titer product. This titer does persist for several weeks, to months, depending upon the individual animal. If this is repeated there is an anamnestic response and a higher titer is produced or one equivalent to the original titer. It reaches a certain plateau and then is maintained at that level. The same thing probably happens to the dog that runs loose in the community. Being exposed to distemper maintains the titer in that animal.

Some of them will maintain a very high titer, some a moderate titer and some a brief, low titer and are then susceptible again. This is true as far as dogs that are kept in isolation or kept in homes and are not frequently re-exposed. Those dogs will become susceptible and will come down with distemper.

In discussing the distemper immunization (Continued on page 18)

^{*}Presented at the CVMA Convention, Santa Monica, June 21-23, 1959.



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Wild Rabbits Harboring Virus Disease

Some of the wild rabbits in California appear to be harboring the same virus disease that has wiped out a large portion of Australia's pesky rabbit population, according to the recent findings of a visiting scientist at the University of California, Berkeley.

While the disease—called myxomatosis—has little effect on American wild rabbits, it is nearly always fatal to members of the European wild rabbit family, which includes all American domestic rabbits as well as the introduced varieties that have run rampant in Australia.

Dr. I. D. Marshall, research fellow at the Australian National University, visiting in the School of Public Health at Berkeley, discovered evidence of the mosquito-borne disease in California cottontails and brush rabbits after outbreaks had occurred last August among domestic rabbits near San Diego and Palo Alto.

The scientist's studies, supported by a grant from the National Academy of Sciences, are aimed at learning more about the disease in order to promote its spread in Australia (where it is a welcome benefit to agriculture) and to prevent its spread in California (where it is a menace to the domestic rabbit industry).

Last August, some 200 rabbits died from the disease in four San Diego rabbitries. At the same time, smaller outbreaks were reported among backyard-type rabbit projects near Palo Alto.

Livestock Loss Prevention Year

Results of National Livestock Loss Prevention Year, just closed, have added up to some good news both for the veterinarian and the livestock industry.

Literally thousands of columns have been devoted to the project by the nation's newspapers and farm magazines. Month after month, many farm magazines across the country devoted full page features to the campaign, and a number of leading livestock and affiliated groups cooperated as well. Thousands of hours, also, have been spent by radio and television stations in beaming the Loss Prevention Year material to animal owners.

"This has been the largest, single, coordinated program ever conducted on behalf of the practicing veterinarian and better animal health," reports a spokesman for Associated Veterinary Laboratories, whose member companies underwrote the project.

The campaign to educate animal owners focused, month by month, on major disease hazards, and pointed up the value of calling in the veterinarian to deal with these problems.

Distemper Immunization

(Continued from page 16)

program with one of the veterinarians from Holland, he made this statement: "If you have a very highly potent antigen you may use serum simultaneously with it and there would be no interference."

An attenuated chick embryo distemper antigen should produce a fairly high antibody titer and protection within 72 hours after one has used the antigen by the subcutaneous route. If one is using a killed antigen, one does not get good protection until two to three weeks after vaccination. The attenuated product, therefore, gives quicker and more persistent protection.

One should stress the importance of the practitioner knowing the history of the bitch, the history of the puppies, to know whether or not the bitch was revaccinated so as to give a higher transfer of antibody titer through the colostrum to the puppies. One should realize that this antibody transfer may block the antigen-antibody response in the vaccinate for a period of five weeks, seven weeks, nine weeks, depending upon the age of the bitch and depending upon the individual puppies within the bitch. If the puppies from this hitch have had distemper breaks in the past at five weeks of age, then you would expect her to repeat. She wouldn't be a good prospect to keep or to recommend that the owner keep.

American Cyanamid Grant to U.C.

The School of Veterinary Medicine of the University of California has accepted a grant from American Cyanamid Company to test appropriate chemotherapeutic agents for the control of pleuropneumonia-like organisms causing infections in poultry.

The studies are under the direction of Dr. Henry Adler, who is working with both chickens and turkeys.

The organisms, referred to as PPLO by the poultry industry, cause chronic respiratory disease in chickens and infectious sinusitis in turkeys. Both are major diseases of economic importance in poultry-producing areas, and it is Dr. Adler's aim to develop a PPLO vaccine to help poultrymen combat these diseases.

The pleuropneumonia-like organism is the smallest form of bacteria known and has some characteristics closely related to the larger viruses and rickettsia.

Disease outbreaks often occur in flocks that have been weakened by exposure to conditions of stress or secondary invaders. Dr. Adler is using Aureomycin chlortetracycline in his studies to help ward off these adverse conditions and to aid in new methods of treatment developed by using new chemotherapeutic agents.

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WOMEN'S AUXILIARY NEWS

Profile of a President

Mrs. Eugene Story, President of the Sacramento Valley Ladies' Auxiliary and a native Californian, met her future husband while they were still in high school in Sacramento. Later



MRS. EUGENE STORY

she entered the University of California School of Nursing at San Francisco, and Eugene attended the School of Veterinary Medicine at the University of California at Davis. Upon graduation from nursing

school in 1952, Ann began work with the San Francisco City and County Hospital, saving her money for a trip to Europe with two friends in 1953. Ten days after her return she and Eugene were married. The Air Force saw fit to station them at McClellan Field near Sacramento and, upon receiving his discharge, Dr. Story also chose Sacramento as the place to begin his practice in February 1957. Their two daughters are Coleen, four years, and Cheryl, 21 months. Ann's hobbies are skiing and oil painting. She belongs to AAUW, Art League, and Symphony League. Recently the Sacramento Bee featured a lovely color picture of Ann in its society section in connection with her work for the Symphony League.

Statewide Bang's Disease Committee

A statewide Bang's Disease Committee meeting was held in Sacramento, November 23, with 26 members in attendance.

Dr. H. G. Wixom gave a progress report on the recent work accomplished: Twenty-three counties have been certified and certification is pending in three other counties (Glenn, Yuba and Placer); other counties nearing certification are Mendocino, Napa, San Mateo, San Francisco, Calaveras, Santa Cruz, Monterey, San Benito, San Joaquin and Stanislaus.

The Federal appropriation was cut from \$20,525,000 to \$16,637,000. As a result of this reduction it has become necessary to cut the work being carried on and assign priorities on the basis of: Areas where certification is being maintained or where the area is now ready for certification; areas where work is now being carried on.

California's Federal allotment last year was \$711,000. This year it was cut to \$649,016.

Livestock Diseases Reported E. F. Chastain, D.V.M.

Tabulation of Diseases Reported to the State Bureau of Livestock Disease Control during the period September to December, inclusive, 1959.

		SeptDec. Inc. 1959		
		North	Central	South
Actinomycosis		1		1
Anaplasmosis, Cattle		5	5	4
	Sheep	1	1	
Anthrax,	Cattle	3	1	
	Sheep	1		
Blackleg		Ī		
Bluetongue		5	2	
Bovine Bacillary	Hemoglobinuria	1		
Bovine Encephali	tis	1		
Coccidiosis,	Cattle	1	1	
	Sheep	1		
Contagious Ecthy	Marketon	1 3	1	1
Cysticercus Bovine		1 7	19	112
Equine Encephale		i		
Equine Infectious		İ	1	
Equine Virus Abo	Assert Market Control of the Control	1		2
Erysipelas,	Sheep	Ì	1	-
en y or promos	Swine	1 1	1	1
Foot Rot,	Cattle	1	1	-
	Sheep	1	1	
Hydroplasis, Lan		1	1	
Hob Cholera		1	2	
Infectious Atroph	ic Phinitis	1	1	-
Johnes Disease,	Cattle	3	1	
Johnes Disease,	Sheep	1	1	
Leptospirosis,	Cattle	33	32	3
Leptospirosis,	Horses	1 00	2	1 3
	Sheep	1	1 4	
	Swine	1	3	1
Listeriosis,	Cattle	1	1	1
Lasteriosis,		-	1	
Malignant Edem:	Sheep	1 1	1	
Malignant Catar		1	1	1
Mucosal Diseases		1	1	1
Paratyphoid,	Cattle	2	25	2
raratyphold,	Horses	1 4	1 23	1
	Sheep	-	1	1 1
		-	1 2	1
Psoroptic Scab,	Swine Cattle	-	1 4	-
rsoropue seab,		-	1	-
D. U. Davis	Sheep	1		1 2
Rabies, Bovine		-	2	1 1
Rhinotracheitis		1	1 4	4
Scrapie	Cattle	-	-	1 10
Screwworm,	Cattle	-	1	10
	Encephalomyelitis	1	+	-
	astro Enteritis, Swine	-	-	1
Tuberculosis, Sw		1	1	1
Vesicular Exanti	***	1	-	1
Virus Diarrhea,		1	-	1
Vibrio fetus,	Cattle	1	2	1

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Laboratory Notes

From the Department of Clinical Pathology, School of Veterinary Medicine, University of California.

Rapid Tests of Hemostatic Defects

The mechanism of blood coagulation is a complex series of reactions which has as its essentials: (1) formation of thromboplastin from precursors in the blood platelets; (2) the conversion of prothrombin to thrombin by this active thromboplastin, and (3) the conversion of fibrinogen to fibrin by thrombin. In the diagnosis, treatment and study of hemorrhagic diseases, a number of tests designed to estimate the speed of coagulation and the presence or absence of the various factors involved in coagulation are available. A selected number of these tests may be employed as screening tests which may guide the clinician in further study, diagnosis or treatment.

Bleeding Time (Duke Method): A moderately deep skin puncture (or mucous membrane) is made with a No. 11 Bard-Parker blade so that a free flow of blood is obtained. Pressure should not be used to obtain the free flow. At 30-second intervals, the drops of blood are removed by absorbing with a piece of filter paper and the time at which bleeding ceases is noted. In the domestic animals, the bleeding time varies between 1-5 minutes by this method.

Coagulation Time: Variation in bleeding times and coagulation times in normal animals are usually the result of variations in techniques and temperature. Of these, temperature is of the utmost importance, particularly in coagulation time determinations, and it cannot be stressed too strongly that normal controls should be run together with the patient.

The coagulation time determination may be performed easily and quickly by either of two procedures. In the capillary method, a skin puncture is made similar to the bleeding time method. After wiping off the first drop of blood, blood is taken up into a capillary tube about 15 cm long by 1-1.5 mm diameter. At intervals of one minute, the tube is broken off at 1-2 cm pieces. When coagulation occurs, fibrin strands will be seen between the broken ends and the time is noted. By this method, the horse and cow exhibit coagulation times varying between 3-15 minutes. The other domestic species vary between 1-5 minutes.

In the tube method of Lee and White, 3 ml of venous blood is drawn into a clean dry all-glass syringe. It is important that the vein be entered quickly and cleanly to avoid contamination by tissue juice and to avoid air bubbles due to excessive suction. One ml of blood is delivered into each of three 11 mm (I.D.) test tubes which are then placed in a 37°C, water bath if at all possible. In large animals blood may be collected directly into tubes which have previously been marked at the 1 ml level. After 2 minutes, the first of

the three tubes is gently tilted at 30-second intervals until the tube can be inverted without spillage of blood. At this time, tilting of the second tube is commenced and when this tube has clotted, the third tube is used. Timing is begun when blood first enters the syringe and the end point is reached when the blood in the third tube has clotted. Coagulation times by this method are noticeably longer than the capillary method in all the domestic animals. In the horse and cow, times of 4-15 minutes have been recorded1 while in the dog a normal range of 3-13 minutes is reported.2

Platelet Estimations: Direct and indirect methods for the estimation of platelet numbers have been devised. Of these, the indirect method is the more practical and will be discussed. It may be performed from the stained blood smear, which has been prepared for routine hematological examination of blood. The simplest procedure is to note the number of platelets per oil immersion field. The finding of three or less would suggest a thrombocytopenic condition. If the total red cell count or the white cell count is known, the number of platelets may be compared to the number of red or white cells in the smear, e.g., No. of Platelets/100 WBC. This relative number may be transposed into the absolute number simply by:

No. of Platelets X WBC ct = No. of Platelets 100 WBC

Normal values as determined by the direct method have been reported for the dog 200-480,000/mm³,² Cat 150,000-250,000/mm³,³ Cow 300-800,000/mm3,3 and Horse 90-410,000/mm3.4 In addition to other hematological findings, a severe thrombocytopenia is seen in brachenfern poisoning.5 Thrombocytopenia, prolonged clotting times and bleeding times are observed in the aplastic anemia of animals fed trichloroethylene extracted soy bean oil meal.6 In dicourmarol poisoning or Sweet Clover Disease of cattle, the coagulation time is prolonged.7 This prolongation is attributed to a reduction in prothrombin levels and this test will be discussed in a subsequent laboratory J. J. KANEKO.

References

- ¹Kaneko, J. J.: Unpublished data. ²Lorrain, C., and Langdell, R. D.: Blood, 11:1067
- (1956).

 3 Coffin, D. L.: Veterinary Clinical Pathology, Comstock Pub., Ithaca, New York (1953), p. 156.

 4 Boddie, G. F.: "Diagnostic Methods in Veterinary Medicine," J. B. Lippincott Co., Phila., Pa. (1953).
- Medicine," J. B. Espandott.
 p. 354.
 °Evans, W. C.; Evans, I. Antice; Thomas, A. J.;
 °Evans, W. C.; Evans, I. Antice; Thomas, A. J.;
 Watkins, J. E., and Chamberlain, A. G.; Brit. Vet.
 Jour., May 1958, Vol. 114, No. 5.
 °Pritchard, W. R.; Rehfeld, C. E., and Sautter,
 J. H.; J.A.V.M.A., 121:1 (1952).
 'Roderick, L. M.; Am. J. Phys., 96:413 (1931).

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Directions: Direct Iron Bomb spray on the teats and udders of nursing sows and/or on concrete floor of pens. Repeat the treatment as needed, preferably each day. Iron Bomb delivers approximately 2 cc. in one second, sprayed over a distance up to 36 inches. With 157 cc. in each plastic-coated glass bottle, Iron Bomb supplies a total of 15,700 mg. elemental iron.

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Vaccinating for Leptospirosis

by Frank W. Binkley, D. V. M. research associate Haver-Lockhart Laboratories

During the last 20 years—particularly in the last decade—leptospirosis has received an exhaustive re-examination by both practitioners and research veterinarians. The resulting flood of information has permitted easier diagnostic methods and adequate measures for prevention and control

Prior to the development of Stoenner's Plate Test all diagnostic work had to remain in the hands of laboratory technicians due to the fastidiousness of the leptospiral organism. Research workers generally agree that this organism is one of the most difficult to work with in the routine of growing, recovering and reproducing leptospira. Now, with the development of the Stoen-ner's Plate Test (similar to the brucella plate test) every practicing veterinarian can do his own work to confirm or disprove a tentative diagnosis. Although this test is still in the argumental stage, enough evidence has been accumulated to show that it has decidedly practical advantages over any other type of laboratory test developed so fár for field use. With this armamentarium the practitioner can be surer of his decision as to a vaccination program.

Vaccination program

In vaccinating animals veterinarians face a number of variable factors including differences in herds, locales, degrees of exposure and clients' viewpoints. However, some general rules can be applied to most cases:

- In leptospirosis-free areas the owner often wants animals vaccinated for possible future shipment into other areas. In this case a single dose of Leptospira Pomona Bacterin should suffice.
- 2. In areas where leptospirosis is suspected but not endemic, two doses of Leptospira Pomona Bacterin given six months apart should protect most herds. It has been established that 6 to 12 months' protection can be expected.
- 3. In endemic areas veterinarians face a delicate problem in prescribing the correct type of program for a client's herd. If a tentative diagnosis of leptospirosis has been made, of first importance is a blood test to determine which animals are carriers and which ones have the

disease. Following this a decision must be made by the client as to how he wishes to eradicate leptospirosis from his herd. One or more of the following suggestions can be made:

- a. Test and slaughter reactors.
- Test and clear up carriers or sick animals with massive doses of antibiotics.
- c. Vaccinate the entire herd that has been exposed (Leptospira Pomona Bacterin should provide some protective immunity within 7 to 10 days).
- d. Revaccinate within 30 days.
- e. Revaccinate 6 months later.
- f. Revaccinate yearly thereafter.
- g. Blood test and vaccinate all new additions to the herd.

One of the pitfalls of the program is that vaccinated cattle generally will have a high reaction titre. Therefore the client should be given all vaccination records, and this information should preclude difficulties when he desires to sell animals or enter them in fairs.

Another precaution is to be alert for possible allergic reactions when cattle are revaccinated. Such reactions may occur owing to the rabbit serum content of lepto bacterins. Clients should be forewarned that reactions may take place. As a precaution, always have a supply of epinephrine HCl on hand in case of allergic reactions.



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Toxoplasmosis in the Cat—A Case Report

NORMAN T. FREID, D.V.M., Practitioner, San Francisco

Even a cursory examination of the literature pertaining to toxoplasmosis in animals suggests that much benign as well as clinical toxoplasmosis exists in practically all of the species veterinarians are concerned with, as



NORMAN T. FREID

well as in the human family. The wide diversity of clinical signs which the infection evokes, seem to mimic the commonest syndromes of the dog and cat, so that even a presumptive diagnosis of active toxoplasmosis calls for considerable courage by the practitioner.

Although several clinical laboratory tests are available

(complement - fixation, Sabin - Feldman dye test, et cetera), isolation of the organism may be decisive in the diagnosis. Yet, even then the presence of other infections producing the lesions or acting to "trigger" the toxoplasma must be considered.

Presented here are the clinical and histopathological findings for a feline patient. Reports of toxoplasmosis in the cat are not too common, but perhaps the disease is not as "exotic" in this species as the sparse literature indicates. At any rate the pathologist in this case, Dr. Irving Root of U.C. Medical School, felt most of the findings were compatible with the diagnosis of acute toxoplasmosis. The presence of any other concurrent infection was never established.

The patient, a five-month-old male Siamese, when first examined had a 104°F. temperature, inappetence, marked lethargy and scant, soft stools. The blood picture was unremarkable. The symptoms were of two day's duration. Antibiotic and appropriate supportive therapy seemed to relieve the malaise and restore appetite, but the fever persisted at or near 104°F. On the fifth day of treatment a marked edematous condition of the head and neck developed, with palpable enlargement of the cervical lymphatics and also of the inguinal nodes. By the eighth day the edema and lymphadenopathy were substantially subsiding and two days later the temperature was normal, and appetite fair. However, during the next seven days a gradual regress occurred in the patient's condition despite every supportive measure. Death ensued 17 days from the onset of illness. Unfortunately, none of the clinical laboratory procedures for detecting toxoplasmosis were employed because we were not alerted to the possibility of this disease.

On autopsy, gross examination of the tissues was unremarkable. Sections of the lung, thymus, esophagus, liver, pancreas, kidney and spleen were fixed in buffered formalin for histologic examination. The report follows:

Microscopic: Heart: There are numerous pseudocysts of protozoan organisms present within the myofibrills. There appears to be no inflammatory reaction surrounding these. Lung: There is diffuse alveolar septal cell proliferation, the cells being large with large vacuolated nuclei containing one or more nucleoli and occasional mitoses. In areas the macrophages appear to lie free in the alveolar spaces. There are focal alveolar and bronchiolar plugs of eosinophilic amorphic debris which suggests an origin of fibrin and sloughed necrotic alveolar wall cells. The process is variable in intensity but involves the entire lung. There are relatively few PMNs present. Lymphocytes are absent. There are scattered pseudocysts of protozoan organism within the alveolar septs. Thymus: The thymus is atrophic, involuted and shows some cystic degeneration. There are scattered pseudocysts of protozoa both in the fat and within the involuted degenerated follicles. Esophagus: There is an intense necrosis and acute inflammatory reaction of the mucosa, submucosa, and muscle. There are many pseudocysts of organisms of protozoan type present primarily within the tunica muscularis of the esophagus. Liver: There are several pseudocysts of protozoa present within the liver. The liver is otherwise unremarkable. Pancreas: There is an extensive interlobular fibrosis with marked decrease in the number of pancreatic acini. No islets are present. There is focal fat necrosis, macrophages and focal lymphocytic infiltrations. No organism can be detected within the pancreas. Kidney: There are rare pseudocysts of protozoa present in the kidney. There is no inflammatory reaction or other abnormality present in the kidney. Spleen: The spleen was unremarkable. There are no organisms demonstrable within the spleen.

Diagnosis: (I) Toxoplasmosis with:

- (a) Diffuse severe interstitial pneumonitis.
- (b) Acute esophagitis.
- (c) Chronic pancreatitis.
- (d) Organism of toxoplasmosis present in heart, lung, thymus, esophagus, liver, and kidney.

Note: The chronic pancreatitis here has been reported in the past in association with chronic toxoplasmosis.

(Continued on page 40)

U. S. Livestock Sanitary Assn. Holds Successful S.F. Meeting



JAMES R. HAY

The United States Livestock Sanitary Association's 63rd annual meeting was held December 16-18 in the Sheraton-Palace Hotel, San Francisco, and was well attended by members from all over the country.

Complete reports on 23 committees were given during the sessions. These included the following subjects: anaplasmosis, biologics and pharmaceuticals, parasitic diseases, brucellosis, rabies, hog cholera, leptospirosis infectious diseases of cattle, diseases of poultry, public health, public relations, diseases of sheep and goats, regulatory education, diseases of swine, tuberculosis and vesicular diseases.

A large number of California veterinarians

attended the conclave.

Dr. Francis G. Buzzell, Augusta, Maine, presided. The new president will be Dr. James R. Hay, Chicago.

Dr. Ozanian and Ken Humphreys represented the CVMA at this meeting.

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Eaton's Fourth Regional Conference

Eaton's Fourth Regional Conference on the Nitrofurans in Veterinary Medicine will be presented under the sponsorship of the Bay Counties VMA on April 1 in the Fairmont Hotel, San Francisco.

Large and small animal sessions will be presented with speakers from various parts of the country. Invitations, signed by Dr. L. O. Johnson, president of the BCVMA, will shortly be issued to all veterinarians in the state.

General chairman of the one-day session will be Dr. Tom D. Harris, Jr., past-president of the BCVMA, and through whose office negotiations for the meeting were begun several months ago. Dr. Norman T. Freid is liaison officer. Members of the local association will serve as session chairmen.

Complete details, with photographs, will appear in the March-April issue of The Cali-

FORNIA VETERINARIAN.

W. E. Warne, New State Director of Agriculture

Governor Edmund G. Brown has appointed William E. Warne as the new State Director of Agriculture, succeeding Dr. W. C. Jacobsen, retired.

Warne, 54, had been Director of the Department of Fish and Game, and formerly Assistant Secretary of the Interior under President Truman.

"I regard Bill Warne as one of the ablest men now in the State service," said Governor Brown. "He has done a remarkable job as administrator of the State Fish and Game program. I am sure he will do an equally outstanding job in the Department of Agriculture."

Resolution Asks for Pacific Area Animal Ougrantine Station

The California State Board of Agriculture, meeting in Sacramento December 21, 1959, passed a resolution asking the Congress of the United States to provide funds for the establishment and maintenance of an animal quarantine station to serve the Pacific area.

The resolution cited the fact that large numbers of foreign animals and birds are being imported into this country by oceangoing vessels and airplanes through Pacific Coast ports; and that California has experienced several costly and severe outbreaks of diseases among its livestock, brought in directly or indirectly from foreign sources.

Copies of the resolution were furnished to the United States Senators from California; members of the House of Representatives from California; the Secretary of Agriculture; Governor Edmund G. Brown, and others.



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Highlights-MIDWINTER CONFEIN



Women's Auxiliary Officers: Front row, the Mesdames R. T. Hauge, Russell P. Cope, Ben S. Burdo (president), and Herbert Ott. Back row: the Mesdames Charles H. Ozanian, W. W. Putney, Louis Johnson, Reginald Stocking and Donald E. Jasper.

Below: Local Auxiliary Presidents: the Mesdames J. M. Christensen, Alameda-Contra Costa; Eugene Story, Sacramento Valley; Robert Hewson, student wives, and Philip Olson, immediate past-president SCVMA.



Despite inclement weather there was an exceptionally large attendance at the Midwinter Conference. The excellent program was arranged by Dr. R. L. Collinson, chairman, and Dr. Charles E. Cornelius, cochairman. The closed circuit TV, again sponsored by Allied Laboratories, Inc., Pitman-Moore Company Division, was highly successful. Moderators were: Dr. G. D. Pettit and Dr. J. W. Kendrick. On the first day of the meeting the Ninth Annual Western Poultry Disease Conference was held.

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The Ladies Auxiliary Luncheon and Fashion Show.



Two presidents: Dr. Samuel F. Scheidy, AVMA, and Dr. Charles H. Ozanian, CVMA. Portrait on wall is that of the late Dr. C. M. Haring.





Closed circuit TV: Left, Dr. Murray Fowler and aide; above, Dr. James Temple talking to Moderator Kendrick.

NCE, Davis, February 1, 2, 3, 1960*

held in the new Sacramento Inn, was an outstanding event. Two banquets were held in Governor's Hall, State Fairgrounds: The Veterinary Alumni Dinner, February 1, and the President's Banquet, February 2. Our hosts were: H. C. Burns Co., California Medical Supply; Central City Chemical; Ciba; Cutter; Diamond; Fort Dodge; Fromm; Hill Packing; Jensen-Salsbery; Kal-Kan; Modern Veterinary Practice; Parke, Davis; Pfizer; Pitman-Moore; Schering, Sharpe & Vejar; E. R. Squibb & Sons and Valley Veterinary Supply.

* Report of Conference will appear in next issue.



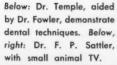
Office secretary, Mary Fatjo, supervises Registration desk.



Dr. Jacob Traum and Dr. Leo Conti reminisce.



San Francisco Veterinary College grads at Alumni Dinner: Leo Conti, R. E. Duckworth, Mrs. Duckworth, and J. M. Arburua.







Group at Fifth Annual Large Animal Practitioners' Luncheon, Hotel El Rancho.



Dr. Schroeder, President, SCVMA

Dr. Robert J. Schroeder was installed as president for 1960 of the Southern California Veterinary Medical Association at the Association's Annual Installation Ball held at the



ROBERT J. SCHROEDER

Beverly Hilton Hotel on January 9, 1960. Mr. Frank Bonelli, Chairman, Los Angeles County Board of Supervisors, served as installing officer.

Dr. Schroeder, a graduate of Colorado State University in 1947, is now Livestock Inspector for the County of Los Angeles, a post he has held since April, 1957. Prior to his appointment as Inspector, Dr. Schroeder spent one year with the U. S. Government on loan to

Mexico in Foot and Mouth Disease control. He has been with the local county eight years.

He will succeed Dr. Howard C. Taylor as president of the local veterinary association, whose term expired on December 31.

A native of Fort Collins, Colorado, Dr. Schroeder moved to Downey, California, in 1948. He served as a paratrooper in World War II and the Korean War.

Dr. Schroeder is a member of the Agriculture Committee of the Los Angeles Chamber of Commerce. He is immediate past president of the Vernon Lions and a member of the Tyre Masonic Lodge of Downey.

Other officers installed were: Dr. Ralph C. Vierheller, President-Elect; Dr. John H. Hensley, First Vice-President; Dr. Fred P. Sattler, Second Vice-President; Dr. W. A. Young, Treasurer; Dr. George N. Thomas, Secretary.

Death of Dr. Cope's Father

Garfield A. Cope, father of Dr. Russell P. Cope, former Treasurer, CVMA, passed away on December 17, 1959, in Los Angeles.

A resident of Missouri, Mr. Cope was 78 years old. He was owner of the Cope Dairy in Hastings, Neb., for 34 years, retiring in 1943. He married Ethel Parker 54 years ago, and is survived by his widow and three children.

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- A. Lease agreement, etc.

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LOCAL ASSOCIATION NEWS

Tulare County VMA

Dr. E. R. Braun, president-elect, CVMA, and Kenneth Humphreys, executive secretary, CVMA, were guests at the November meeting of this group. Pictured are: Dr. D. E. Britten, Visalia; Dr. L. H. Brazil, Tulare; Dr. E. R. Braun, Hanford, and Kenneth Humphreys, San Francisco.



Bay Counties VMA

On December 8, the Bay Counties VMA combined an enjoyable Ladies Night with their annual installation. Nearly 60 veterinarians and their wives attended the affair at Berkeley's Claremont Hotel. Officers elected for 1960 were: Dr. L. O. Johnson, president; Dr. Seymour Roberts, vice-president; Dr. W. T. Berner, secretary, and Dr. Roger Burr, treasurer. On April 1, the BCVMA will sponsor Eaton Laboratories' California Regional Conference on the Nitrofurans in Veterinary Medicine, to be held in San Francisco.

Southern California VMA

Newly-elected officers of the SCVMA are: president, Dr. R. J. Schroeder; president-elect, Dr. Ralph C. Vierheller; first vice-president, Dr. John H. Hensley; second vice-president, Dr. Fred P. Sattler; treasurer, Dr. W. A. Young; secretary, Dr. George N. Thomas.

A former president of the Southeast Chapter, SCVMA, Dr. Thomas also served as Chairman of the SCVMA Rabies Committee. At the Midwinter Conference, earlier this month, Dr. Thomas was master of ceremonies for the veterinarian alumni dinners, held in Governor's Hall.

Northern California Association

This group sponsored a "Sheep Disease Field Meeting" at the Orland Veterinary Hospital, January 9, 1960, presented by Dr. Blaine McGowan, from Davis. Following the afternoon meeting there were cocktails and dinner at the nearby Blue Gum Lodge.

OPPORTUNITIES

Position Wanted

Interested in locating with veterinarian in Fresno area, or southward. Most experience with large animals, but would consider working in small animals. Write: Robert L. Brewer, D.V.M., Rt. 1, Box 185, Winters, Calif.

Responsible, well educated Yugoslavian refugee veterinary assistant, with family, desires chance in California. Willing to work. Age 36. Contact A. K. Rajkovic, 453 Madison Avenue, New York 22, N. Y.

A 38-year-old veterinarian with 10 years' successful practice of his own wants a position leading to partnership or purchase of a 2-man practice in California. Write Box A-94, The CALIFORNIA VETERINARIAN.

Responsible, experienced small animal practitioner desires permanent association with leading small animal hospital in Bay Area, preferably with opportunity for sharing. Veteran, family man, aged 37. Write Box A-95, The California Veterinarian.

Building Site

Site for veterinary hospital; outstanding location, Lafayette, Calif. Small animal hospital, 1 or 2 doctors, commercial zoning, no neighbor problems. Excellent accessibility to freeways. Center one of California's fastest growing areas. Will assist responsible party with financing. Write Box A-91, The California Veterinarian.

Peninsula VMA

Speakers at the December 15 meeting of the Peninsula VMA were: D. F. Rowles, M.D., associated with Stanford University heart-lung machine research, and Dr. J. H. Twohig, small animal practitioner, who presented members with an informative demonstration of hospital aids. Officers for 1960 are Dr. G. P. Bertetta, president; Dr. A. L. Gilger, secretary-treasurer. Meeting nights are the third Tuesday of each month.

Orange Belt VMA

Newly-elected officers of the Orange Belt VMA are: President, Dr. M. C. McSpadden; vice-president, Dr. C. E. Childs; secretarytreasurer, Dr. K. R. Wilcox.

OPPORTUNITIES

Veterinarian Wanted

Position available in small animal hospital. Oregon license required. Write Box A-92, The California Veterinarian.

For Sale

Small animal practice and equipment for sale (no real estate). Reasonable price and rental terms. Kenneth Behrends, 2209 Randolph Street, Huntington Park, Calif. Phone LU 8-5607.

Top girl's barrel racing horse (gelding); also good for pole bending, stake race and figure-8 race. Eight years old; 1,000 pounds; 14½ hands. My daughter won over \$1,000 last year with him. Price \$1,500. Write J. R. Whitman, D.V.M., Rt. 2, Box 102, San Luis Obispo.

15 M.A. G.E. Portable X-Ray with stand. Condition excellent, with new tube, developing tank and extras. Reasonably priced for quick sale. Also other small instruments. Dr. G. E. Kemp, 651 Elm St., El Cerrito. Phone LA 4-4129.

Small animal practice in Southern California. No real estate. Good lease; easily nets over \$10,000 annually. \$8,500, with \$2,500 down payment. Write Box A-93, The California Veterinarian.

Equine Practitioners

More than 200 equine practitioners attended the 6th annual American Association of Equine Practitioners, December 14-16, in Chicago. California was represented by ten veterinarians.

The next meeting will be held in Phoenix, Arizona.

Death of Dr. Blanche

Dr. George W. Blanche, 85, passed away January 10 at San Fernando. He was founder of the Glendale Small Animal Hospital, a past member of the State Board of Examiners in Veterinary Medicine, past president of the Glendale Rotary Club, and past president of the Glendale Board of Education.

News... FROM OUR ADVERTISERS

John S. Sickles, D.V.M., has been appointed to the Veterinary Medicine Department of Schering Corporation. The announcement was made by Kenneth T. White, director of the Animal Health Division of the Bloomfield, N. J., pharmaceutical manufacturer.

In his new position, Dr. Sickles will assist in Schering's veterinary clinical research program. He will be responsible for maintaining close contact with independent veterinarians studying new veterinary products.

Appointment of Dr. Iain Paton as director of professional services for Jensen-Salsbery Laboratories, Inc., subsidiary of Vick Chemical Company, was recently announced.

In his new position, Dr. Paton will edit the two veterinary publications published by Jen-Sal and he will serve as chief veterinarian in providing technical counsel to the marketing department as well as to practicing veterinarians over the country.

Two films made by Chas. Pfizer & Co., Inc., were among the eight American non-theatrical motion pictures accorded honors at the 1959 Venice International Film Festival. "Life of the Molds" garnered three awards and was the only American film to win in two categories. "Dynamics of Phagocytosis" captured one prize.

Dr. Allen A. Eisenbraun has been appointed to the department of research for **Diamond Laboratories**, it was announced by general manager H. L. Hansen.

Dr. Quentin F. McDonald has been named Veterinary Medical Director of the Professional Products Division for Hill Packing Company, Topeka. He will direct the professional and technical field work for Hill's Prescription Diet lines.

Veterinarians across the country will share in a special 25 per cent savings on "Sulfabrom" between February 1 and March 15, 1960, Merck Chemical Division announced today.

"Sulfabrom," a bromine-substituted sulfamethazine developed by Merck research scientists, is sold exclusively to veterinarians. It has proved efficacious in treatment of shipping fever, calf diphtheria, acute septic mastitis,

News from Our Advertisers

(Continued)

pneumonia, postoperative traumatic gastritis, infected wounds, metritis, peritonitis, coccidiosis (in oral therapy), listeriosis, foot rot, scours, and winter dysentery.

The special price savings will enable veterinarians to treat their heavy winter animal disease problems with this new, potent sulfa at low cost.

Closing ceremonies were held January 12 in Lincoln between representatives of Smith Kline & French Laboratories of Philadelphia, Pa., and Norden Laboratories, Inc., which became a wholly-owned subsidiary.

No change in the administrative, production, sales and service staffs of Norden Laboratories, Inc., was made or is contemplated as a result

of the merger.

Mr. Walter A. Munns, president of SKF Laboratories, and Dr. E. C. Jones, president of Norden Laboratories, Inc., issued the joint statement: "Our plan is to continue in the production of pharmaceuticals and biologicals for sales exclusively to the veterinary profession.

Applicants

Hilding M. Strandberg, San Carlos. Vouchers: John G. Cranfield, Robert M. Lee.
Thurmond McWhorter, Bakersfield. Vouch-

ers: Richard A. Stiern, J. L. Frederickson. Harry J. Conrad, North Hollywood. Vouch-

ers: Max E. McElroy, Louis Larsen.
Henry D. Boerenko, Arlington. Vouchers:

R. E. Philbrick, C. A. Maeda.

Rodney F. Merz, Susanville. Vouchers: R. B. Tangeman, A. F. Giambroni.

P. Eldon Prock, Salinas. Vouchers: John G. Boetger, Atwood C. Asbury.

New Mastitis Vaccine Developed

A new vaccine for the control of staphylococcal mastitis has been developed by Dr. Lawrence W. Slanetz and associates at the University of New Hampshire. It is being manufactured by American Cyanamid Company and is now available to the veterinary profession under the name of Staphylococcus Aureus Toxoid (Slanetz Strain No. 7).

Dr. Chester A. Maeda, San Bernardino, has been commended by the California Department of Public Health for his assistance and support as a member of the Rabies Advisory Committee for Region I, covering the period September 1, 1957, through December 31, 1959.

Dr. Malcolm H. Merrill, Director of Public Health, stated that Dr. Maeda's service had been of great assistance during the important period of implementation of the new law.

Dr. Maeda is a former president of the Orange Belt VMA, and has served on important CVMA committees.

Southern California VMA Symposium



H. DON MAHAN

Every veterinarian in California is invited to attend the SCVMA annual symposium to be held March 15-16 in the Ambassador Hotel, Los Angeles. This highly successful yearly meeting will start off on March 15 with a program for the large animal practitioner. Speakers will be Dr. O. R. Adams and Dr. Fred Neal.

The small animal session gets under way on March 16, with Dr. Mark W. Allam, Dr. Lumb of Michigan State, Dr. Markowitz of Ontario, and Dr. Blakely of Angell Memorial as speakers.

With the addition of Drs. Adams and Allam to the program, Mr. H. Don Mahan, executive secretary SCVMA, announces the finalizing of the outstanding program to be presented.

Dr. O. R. Adams is professor and head, department of veterinary clinics and surgery at Colorado State University. He is also president of the Colorado State VMA.

Dr. Mark W. Allam is dean, School of Veterinary Medicine, University of Pennsylvania.

Senate Launches Study to Evaluate Veterinary Medical Progress

A Senate subcommittee is now working on the first federal study to evaluate the contributions of veterinary medicine to the understanding and control of human as well as animal disease.

As presently outlined the study will cover the significance of veterinary medicine to the national health and economy. Source material will come from private practitioners in this country and abroad; private foundations; 200 veterinarians; the U. S. Government, and national and international organizations in the field.

Assisting the committee are eight pharmaceutical concerns, seven veterinary schools, officials in many federal agencies and the American Veterinary Medical Association.



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Although SULFABROM is notable for producing effective levels in rapid time, once it has entered the blood stream its speed of action slows down considerably. SULFABROM is excreted very slowly; this accounts for its long-lasting effect. In cattle, detectable amounts may be present in the urine for as long as six days. Blood levels remain high, sometimes for as long as 53 to 60 hours. And, because it is excreted so slowly, seldom is the amount of SULFABROM passing through the urinary tract ever large enough to cause crystalluria.

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enough to combat effectively both gramnegative and gram-positive organisms including those responsible for:

calf diphtheria "recovery in 48 hours"; acute septic mastitis "uneventful recovery";

metritis "back on feed and eating normally" in two days;

foot rot "in 48 hours the cow was able to stand and started to eat":

pneumonia "in five days' time this calf was back to normal";1

as well as *scours*, winter dysentery, coccidiosis, shipping fever, listerellosis and miscellaneous infectious conditions, such as peritonitis and infected wounds.

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Government Takes Action on Use of Stilbestrol

In a statement made on December 10, 1959, the Hon. Arthur S. Flemming, Secretary of Health, Education and Welfare, declared: "The Delaney clause of the Food Additives Amendment of the Federal Food, Drug and Cosmetic Act provides that 'no (food) additive shall be deemed to be safe if it is found to induce cancer when ingested by man or animal.' This provision applies automatically in the case of new applications for the use of such additives."

Drugs which leave residues in food and which are being used in accordance with permission granted prior to the enactment of the amendment are exempted, until a finding is made that their continued use is unsafe.

Last May the administration published a statement of policy which brought to a halt the submission of new applications for any uses of diethylstilbestrol which result in the drug being present in either animal or human food. This action was taken because stilbestrol has been shown to induce cancer in test animals when it is included in their diet over comparatively long periods of time.

The principal agricultural use of stilbestrol is in the raising of beef cattle, either as an addition to cattle feed or as pellets implanted in the ears of the cattle. It is also used in the raising of about 1 per cent of the chickens grown in this country.

"No residues of the chemical have been found in beef, mutton or lamb. Stilbestrol is not used in hogs," stated Flemming.

"On the basis of the facts with respect to residues of stilbestrol in poultry, we have taken the following steps: 1. We have requested that the authorized manufacturer of stilbestrol for use in poultry immediately sus-

Poultry Disease Short Course March 14, 15, 1960

A short course on poultry disease diagnosis and treatment for veterinarians is scheduled for March 14 and 15, 1960, on the Davis campus of the University of California. The course, offered by the School of Veterinary Medicine and the Agricultural Extension Service, will be intensive, with demonstrations and practical exercises, as well as discussions of recent developments and the newest research.

Veterinarians interested in attending the short course should get in touch with Dr. A. S. Rosenwald, Extension Poultry Pathologist, 2080 Haring Hall, University of California, Davis, for information on the program, incidental fee, etc.

pend the sale of this product. This the manufacturers have agreed to do. 2. We have requested representatives of the poultry industry and the retail food industry to arrange for the immediate discontinuance of the sale of treated birds to consumers. On the basis of conversations with these representatives I am confident that this will be done."

Dr. Jacobsen Retires

William C. Jacobsen, State Director of Agriculture, left state service January 1, 1960, after 42 years as a state employee and two and one-half years as a federal employee.

Former Governor Goodwin J. Knight appointed Mr. Jacobsen Director of the Depart-

ment July 23, 1954, to succeed A. A. Brock, retired. Prior to his appointment by Governor Knight, Mr. Jacobsen was Deputy Director.

During his long public service, Director Jacobsen has given special effort to sound agricultural regulatory work with emphasis upon an effective agricultural quarantine and pest



DR. W. C. JACOBSEN

prevention program, and greater cooperation and improved public relations with farm groups, and with agencies of the federal, state, and local governments.

In recent years he has given increasing attention to farm marketing problems, and has encouraged "self-help" marketing programs under California marketing laws.

Director Jacobsen was Chairman of the California Commission on Interstate Cooperation from 1957 to 1959, having served as secretary of the Commission from the date of its organization to 1957.

Toxoplasmosis

(Continued from page 27)

Acknowledgments

The author wishes to express sincere thanks to Dr. Irving Root for the histopathological report, and also to the Department of Pathology of U.C. Medical School in San Francisco for much assistance in the past.

References

¹Smith, A. H., and Jones, T. C.: Veterinary Pathology.

²Cole, C. R., et al.: "The Present Status of Toxoplasmosis in Veterinary Medicine," The North American Veterinarian, 35, pp. 265-269.

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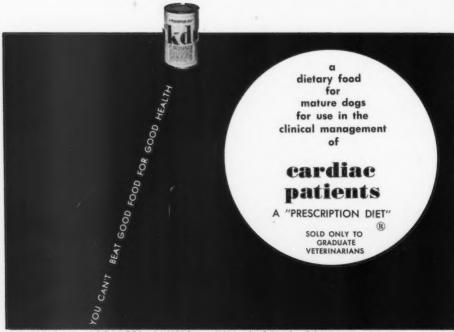
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*Willis, T. Ellsworth: Clinical Experiences with a New Glucocorticoid, Veterinary Medicine 54:489 (September) 1959.

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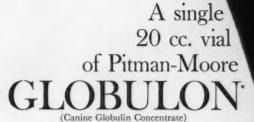
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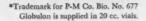
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